ITEM F-162
CHAIN LINK FENCE REMOVAL, STORAGE AND REPLACEMENT AND TEMPORARY CHAIN-LINK FENCES

DESCRIPTION

162-1.1 This item shall consist of removal, storage and replacement of fencing, and furnishing, erecting and removal of a temporary chain-link fence in accordance with these specifications and the details shown on the plans and in conformity with the lines and grades shown on the plans or established by the Engineer.

MATERIALS

162-2.1 FABRIC. The fabric shall be *woven* with a 9-gauge galvanized steel wire in a 2-inch mesh and shall meet the requirements of galvanized steel fabric and conform to the requirements of ASTM A 392, Class 2.

162-2.2 CHAIN-LINK FENCING POSTS. Posts shall be produced from standard "T" rails weighing 91 lbs/yd or more according to ASTM A499, Grade 60; or ASTM A702 (1.33 lbs/ft only). Posts shall be unfinished, hot dip galvanized per ASTM A123, or.

162-2.3 WIRE TIES AND TENSION WIRES. Wire ties for use in conjunction with a given type of fabric shall be of the same material and coating weight identified with the fabric type. Tension wire shall be 7-gauge marcelled steel wire with the same coating as the fabric type and shall conform to ASTM A 824. All material shall conform to Fed. Spec. RR-F-191/4D

162-2.4 CHAIN-LINK FENCING MISCELLANEOUS FITTINGS AND HARDWARE. Miscellaneous steel fittings and hardware for use with zinc-coated steel fabric shall be of commercial grade steel or better quality, wrought or cast as appropriate to the article, and sufficient in strength to provide a balanced design when used in conjunction with fabric posts, and wires of the quality specified herein. Barbed wire support arms shall withstand a load of 50 pounds applied vertically to the outermost end of the arm.

162-2.5 CONCRETE. Concrete shall be of a commercial grade with a minimum 28-day compressive strength of 2500 psi.

162-2.6 MARKING. Each roll of fabric shall carry a tag showing the kind of base metal (steel, aluminum, or aluminum alloy number), kind of coating, the gauge of the wire, the length of fencing in the roll, and the name of the manufacturer. Posts, wire, and other fittings shall be identified as to manufacturer, kind of base metal (steel, aluminum, or aluminum alloy number), and kind of coating.

CONSTRUCTION METHODS

162-3.1 FENCE REMOVAL AND STORAGE. The chain link fence shall be removed, along with all posts and concrete. Care shall be taken when removing the fence to keep all pieces intact so as to re-use the fence to the extent possible and to avoid damaging the remaining fencing, gates and gate operators. The fencing shall be stored in a safe place identified by the

Station manager. The cost of removing and disposing of the material shall not constitute a pay item and shall be considered incidental to fence construction.

162-3.2 INSTALLING TEMPORARY POSTS. All T posts shall be driven into the ground a maximum of 30" deep and shall be spaced no more than 8' on centers.

162-3.3 INSTALLING PERMANENT POSTS. All posts shall be set in concrete at the required dimension and depth and at the spacing shown on the plans.

The concrete shall be thoroughly compacted around the posts by tamping or vibrating and shall have a smooth finish slightly higher than the ground and sloped to drain away from the posts. All posts shall be set plumb and to the required grade and alignment. No materials shall be installed on the posts, nor shall the posts be disturbed in any manner within 7 days after the individual post footing is completed.

162-3.4 INSTALLING BRACES. Horizontal brace rails, with diagonal truss rods and turnbuckles, shall be installed at all terminal posts.

162-3.5 INSTALLING FABRIC. The wire fabric shall be firmly attached to the posts and raced in the manner shown on the plans. All wire shall be stretched taut and shall be installed to the required elevations. The fence shall generally follow the contour of the ground, with the bottom of the fence fabric no less than 1 inch or more than 4 inches from the ground surface. Grading shall be performed where necessary to provide a neat appearance.

At locations of small natural swales or drainage ditches and where it is not practical to have the fence conform to the general contour of the ground surface, longer posts may be used and multiple strands of barbed wire stretched thereon to span the opening below the fence. The vertical clearance between strands of barbed wire shall be 6 inches or less.

162-3.6 ELECTRICAL GROUNDS. Electrical grounds shall be constructed **where a power line** passes **over the fence. The ground shall be installed directly below the point of crossing.** The ground shall be accomplished with a copper clad rod 8 feet long and a minimum of 5/8 inch in diameter driven vertically until the top is 6 inches below the ground surface. A No. 6 solid copper conductor shall be clamped to the rod and to the fence in such a manner that each element of the fence is grounded. Installation of ground rods shall not constitute a pay item and shall be considered incidental to fence construction.

METHOD OF MEASUREMENT

162-4.1 Temporary chain-link fence and permanent chain link fencing will be measured for payment by the linear foot. Measurement will be along the top of the fence from center to center of end posts, excluding the length occupied by gate openings.

BASIS OF PAYMENT

162-5.1 Payment for chain-link fence will be made at the contract unit price per linear foot. The price shall be full compensation for furnishing all materials, and for all preparation, erection, and installation of these materials, and for all labor equipment, tools, and incidentals necessary to complete the item.

Item F-162-5.1	Temporary Chain-Link Fence-per linear foot

MATERIAL REQUIREMENTS

ASTM 121	Zinc-Coated (Galvanized) Steel Barbed Wire
ASTM A 123	Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A 392	Zinc-Coated Steel Chain-Link Fence Fabric
ASTM A 572	High-Strength Low-Alloy Columbium-Vanadium Steels of Structural Steel Quality
ASTM A 653	Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy- Coated (Galvannealed) by the Hot-Dip Process
ASTM A 824	Metallic-Coated Steel Marcelled Tension Wire for Use With Chain Link Fence
ASTM B 221	Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire Shapes and Tubes
ASTM B 429	Aluminum-Alloy Extruded Structural Pipe and Tube
ASTM F 1043	Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework
ASTM F 1083	Pipe, Steel, Hot-Dipped Zinc-coated (galvanized) Welded, for Fence Structures

ASTM F 1183	Aluminum Alloy Chain Link Fence Fabric
ASTM F 1345	Zinc-5% Aluminum-Mischmetal Alloy-Coated Steel Chain Link Fence Fabric
FED SPEC	Fencing, Wire and Post, Metal (Chain-Link Fence Posts, Top Rails and Braces) RR-F-191/3
FED SPEC	Fencing, Wire and Post, Metal (Chain-Link Fence Accessories) RR-F-191/4

END OF ITEM F-162